

What is claimed is:

1. A method for forming a semiconductor device, comprising the steps of:

5 (a) forming a lower insulating layer comprising a landing plug on a semiconductor substrate;

(b) forming an interlayer insulating film on the entire surface of the resulting structure;

(c) forming a bit line on the interlayer insulating
10 film, wherein the bit line has a hard mask layer thereon and a nitride spacer on a sidewall thereof;

(d) forming a storage electrode contact hole exposing an upper portion of the landing plug;

(e) forming a first nitride film on the entire
15 surface of the resulting structure;

(f) forming a second nitride film on the entire surface of the resulting structure, wherein the thickness of the second nitride film disposed at the bottom and on the inner walls of the storage electrode contact hole
20 smaller than that of the second nitride film on an upper portion of the hard mask layer; and

(g) etching the second nitride film and the first nitride film to expose the landing plug.

2. The method according to claim 1, wherein the first nitride film has a step coverage ranging from 85 to 100% and is deposited in a LPCVD process.

5 3. The method according to claim 1, wherein the thickness of the first nitride film ranges from 10 to 200Å.

4. The method according to claim 1, wherein the second nitride film has a step coverage ranging from 5 to 10 40% and is formed in a PECVD process.

5. The method according to claim 1, wherein the thickness of the second nitride film formed at the bottom and on the inner walls of the storage electrode contact 15 hole ranges from 500 to 3000Å.

6. The method according to claim 1, wherein the first nitride film and the second nitride film are continuously formed in the same chamber by varying the flow 20 rate of NH_3 and SiH_4 so as to gradually increase the ratio of SiH_4 .